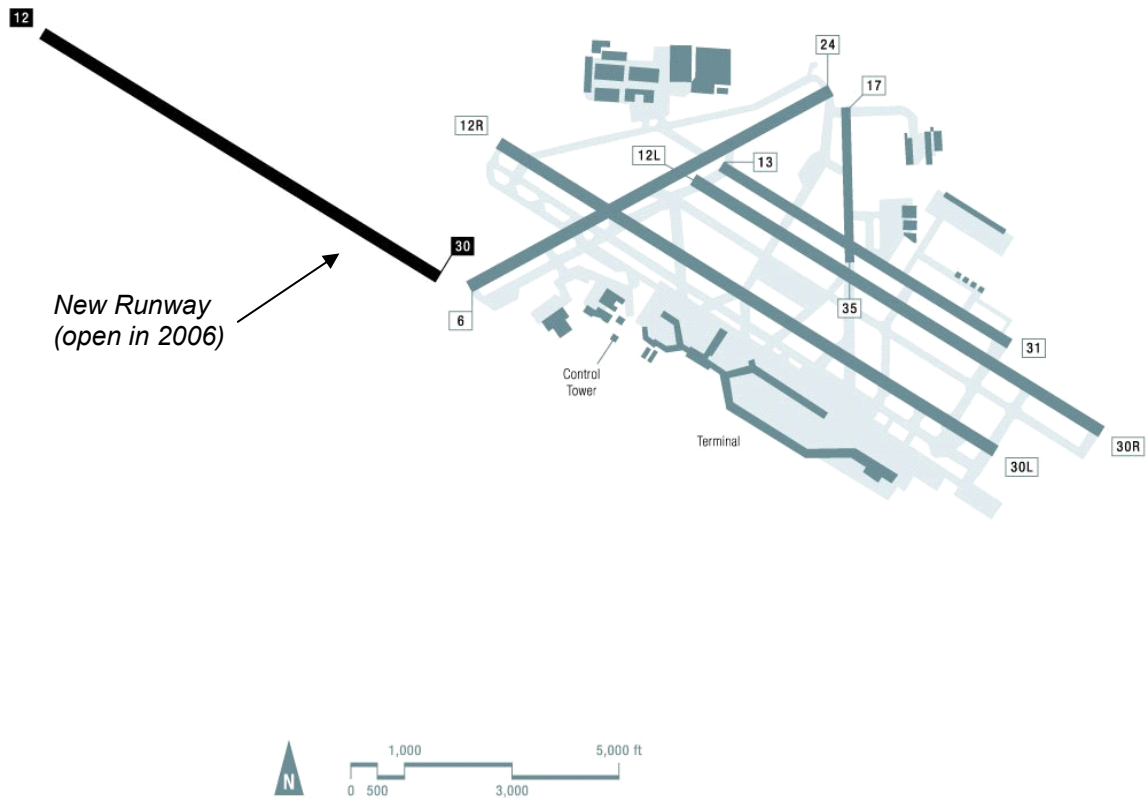


ST. LOUIS – Lambert-St. Louis International (STL)



ST. LOUIS – Lambert-St. Louis International Airport (STL)

Benchmark Results

- The capacity benchmark for Lambert-St. Louis International Airport today is 104-113 flights per hour (arrivals and departures) in Optimum weather, when visual approaches or LDA (sidestep) approaches can be conducted.
- The benchmark rate decreases slightly to 91-96 flights per hour in Marginal conditions (below LDA minima but above 1000 ft ceiling and 3 mi visibility), and to 64-70 flights per hour in IFR conditions (below 1000-3). These benchmarks were determined for runway configurations that were determined by the FAA to be typical for these conditions, although they are not the most frequently used configurations. Data on the frequency with which these configurations are used was not available.
- Other runway configurations may provide greater capacity. On the other hand, these benchmarks do not consider airspace restrictions or other non-runway constraints. More detailed simulations that account for such constraints show lower rates at STL.
- Note that these benchmark rates represent balanced operations. Greater throughput may be possible during arrival or departure peaks.
- A new runway, planned for completion in 2006, will be spaced about 4000 feet from Runway 12L/30R. Together with a PRM system (which is already installed at STL), this runway will potentially allow simultaneous instrument approaches in Marginal and IFR conditions, increasing the benchmark rate by as much as 60 percent. The projected increase in the benchmark rate can occur *only* if ground infrastructure, environmental constraints, staffing, pilot acceptance, and equipment requirements allow simultaneous approaches at STL. The increase in actual operations may be less if airspace restrictions prevent full use of the new runway.
- Planned technological improvements at STL include CEFR, which will allow visual separations in Marginal conditions. CEFR is expected to increase the benchmark rate for Marginal conditions by as much as 18 percentage points.
- Other planned technological improvements at STL would increase the benchmark rate by 5-17 additional percentage points. This additional benefit derives mainly from improved delivery accuracy that is assumed to result from advanced TMA and RNAV procedures. CEFR, another planned improvement, will reduce the in-trail separation between arrivals in Marginal conditions.
- The following charts compare actual hourly traffic with the calculated capacity curves for STL. Some hourly traffic points lie outside the capacity curves, especially for the IFR scenario. There are many possible reasons why this may occur without affecting operational safety, including use of a higher-capacity runway configuration than the one modeled. Also, actual weather conditions during the hour may have been better than the hourly readings in the database, allowing more efficient ATC procedures.

These values were calculated for the Capacity Benchmarking task and should not be used for other purposes, particularly if more detailed analyses have been performed for the airport or for the individual programs.

The list of Planned Improvements and their expected effects on capacity does not imply FAA commitment to or approval of any item on the list.

ST. LOUIS – Lambert-St. Louis International Airport (STL)

<i>Weather</i>	<i>Scenario</i>	<i>Configuration</i>	<i>Procedures</i>	<i>Benchmark Rate (per hour)</i>
Optimum Rate Ceiling and visibility above minima for visual approaches (4000 ft ceiling and 7 mi visibility) and LDA approaches (1200 ft and 4 mi) <i>Occurrence: 76%</i>	Today	Arrivals on Runways 30L, 30R Departures on 30L, 30R <i>Frequency of Use: 59% in Optimum conditions</i>	Dual simultaneous visual or LDA approaches, visual separation	104-113
	New Runway (2006)	Arrivals on Runways 30 (new), 30R Departures on 30 (new), 30L		151
	Planned improvements (2013), including new runway	Same		159
Marginal Rate Below LDA approach minima but better than instrument conditions <i>Occurrence: 17%</i>	Today	Arrivals on Runways 30R, 24 Departures on 30L <i>Frequency of Use: see text</i>	Independent converging instrument approaches, radar and visual separation	91-96
	New Runway (2006)	Arrivals on Runways 30 (new), 30R Departures on 30 (new), 30L	Simultaneous instrument approaches, radar and visual separation	140
	Planned improvements (2013), including new runway	Same	Dual simultaneous approaches, visual separation	155
IFR Rate Instrument conditions (ceiling < 1000 ft or visibility < 3.0 miles) <i>Occurrence: 7%</i>	Today	Arrivals on Runways 30R Departures on 30L <i>Frequency of Use: see text</i>	Instrument approaches, radar separation	64-70
	New Runway (2006)	Arrivals on Runways 30 (new), 30R Departures on 30 (new), 30R	Simultaneous instrument approaches, radar separation	114
	Planned improvements (2013), including new runway	Same		118

NOTE: Data on frequency of occurrence of weather and runway configuration usage is based on FAA ASPM data for January 2000 to July 2002 (excluding 11-14 September 2001), 7 AM to 10 PM local time.

Full operational use of the new parallel runway will require dual monitor positions and staffing to support simultaneous instrument approaches, pilot acceptance of procedures for closely spaced parallel approaches, and an airspace redesign to deliver aircraft efficiently to the approaches.

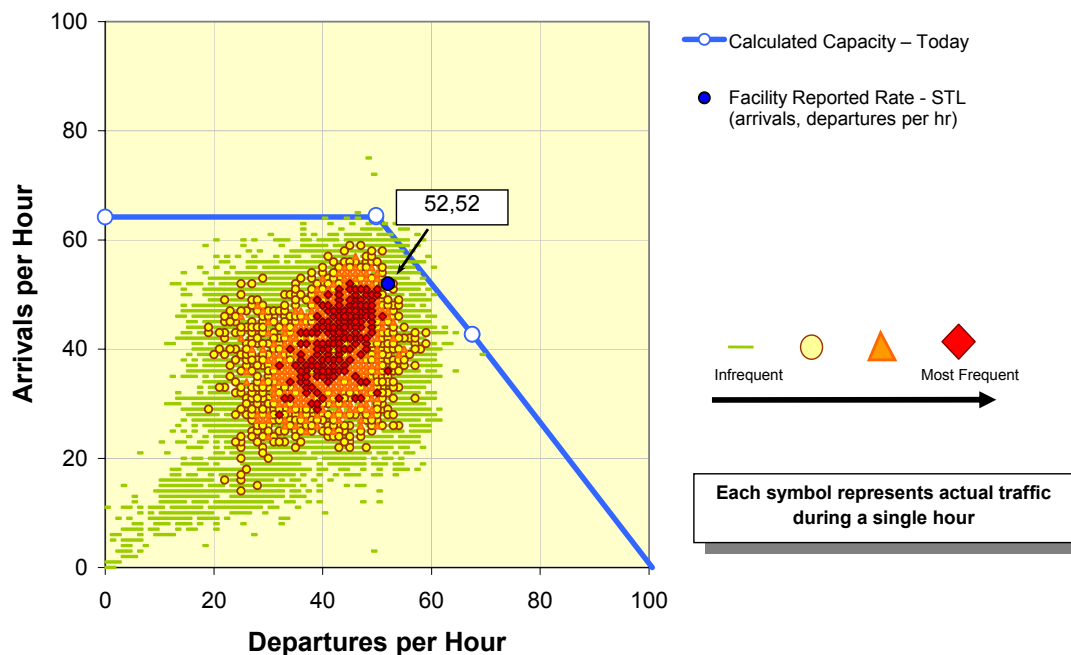
Planned Improvements at STL include:

- CEFR, for reduced in-trail separations between arrivals in Marginal conditions.
- Advanced TMA/RNAV, to improve delivery accuracy and help STL consistently utilize available capacity.

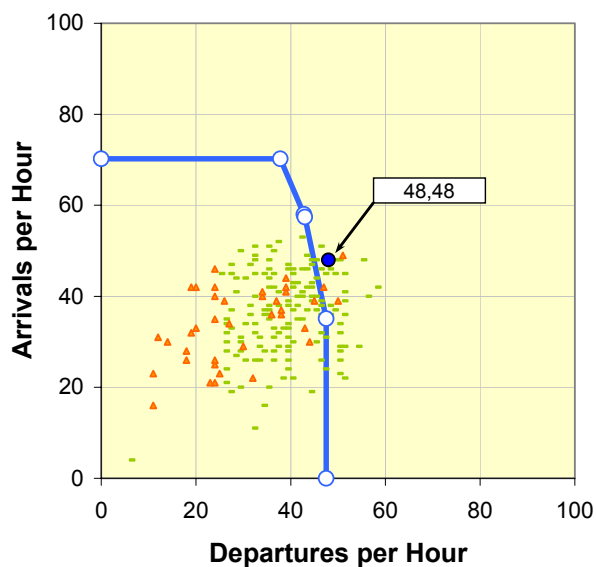
Additional information on these improvements may be found in the Introduction and Overview of this report, under “Assumptions.”

Calculated Capacity (Today) and Actual Throughput

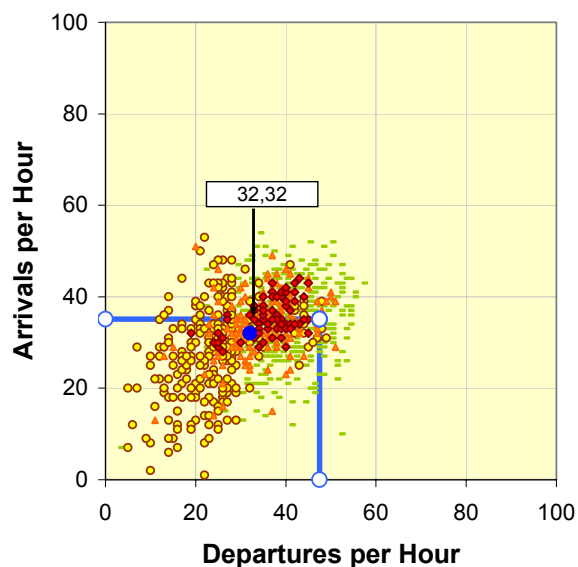
Optimum Rate



Marginal Rate



IFR Rate



Hourly traffic data was obtained from the FAA ASPM database for January 2000 to July 2002 (excluding 11-14 September 2001), 7 AM to 10 PM local time. Facility reported rates were provided by ATC personnel at STL.